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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,205	03/02/2004	Charles A. Milligan	2003-023-DSK	1991
51344	7590	08/23/2006	EXAMINER BU1, HUNG S	
BROOKS KUSHMAN P.C. / STK 1000 TOWN CENTER, TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075-1238			ART UNIT 2841	PAPER NUMBER

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/791,205	MILLIGAN ET AL.	
	Examiner	Art Unit	
	Hung S. Bui	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5,7-15 and 17-30 is/are pending in the application.
- 4a) Of the above claim(s) 7, 11, 13-14 and 24-30 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5,8-10,12 and 15-23 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 September 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/9/05; 4/24/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election/Restrictions

1. Claims 7, 11, 13-14 and 24-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species restriction, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/05/2006.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the flexible cable must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 8-10, 12, 17-19 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Carteau et al. [US 5,506,750].

Regarding claims 1 and 12, Carteau et al. disclose a data storage system (figures 4-10), comprising:

- a plurality of data storage canisters (figures 5-6), each data storage canister comprising:
 - a shell (figure 9);
 - a frame (frame including a base with a rear connector PE1, two sides of an electronic card CDA1 as shown in figures 9 and 13) disposed within the shell, the frame extending in a lengthwise direction along the shell;
 - a plurality of mounting points (a plurality of portions show a long a plurality of connectors C106) disposed along the frame, each mounting point capable of

accepting one module (101-106) of uniform size the mounting points spaced such that mounted modules are mounted in a parallel, spaced apart manner (figure 9);

- a connector (C106) system operative to pass electrical signals through the shell; and a power bus interconnected to the connector system, the power bus operative to deliver power to each module (abstract);
- a communication interconnect system operative to transfer signals between each mounted module and the connector (column 2, lines 57-65); and
- a plurality of data storage modules, each data storage module mounted at one of the plurality of mounting points, each data storage module in electrical contact with the connector system, the power bus and the communication interconnect system.

Regarding claim 2, Carteau et al. disclose wherein at least one canister comprises a retention system (EX101-EX105, figure 13) for seating the data storage.

Regarding claim 3, Carteau et al. further disclose a screw lock (figure 13) for holding the canister within the system.

Regarding claim 8, Carteau et al. disclose a plurality of data storage modules being a plurality of disk drives.

Regarding claim 9, Carteau et al. disclose the frame comprising a printed circuit card (CD1, figure 9).

Regarding claim 10, as best understood, Carteau et al. disclose the frame having a rear connector (PE1, figure 9) can be connect with a cable.

Regarding claim 17, Carteau et al. disclose the electronic card (CDA1) including at least one processor (column 5, line 28) to contact with the connector system, the power bus and the communication interconnect system (figure 9).

Regarding claim 18, Carteau et al. disclose the data storage system including a plurality of virtual volumes (figure 4).

Regarding claims 19 and 23, Carteau et al. disclose the storage system having a first set of canisters and a second set of canister (P1-P7, figure 4), each of the set of canister includes a plurality of data storages as disk drives (101-106), wherein each of the canister has a different disk memories are disposed side by side (column 5, lines 55-61). Therefore, a characteristic of each canister from the first set of canisters is different than the corresponding performance characteristic of the canister from the second set of canister and accepting variable bandwidth access therein.

Regarding claim 22, Carteau et al. disclose the wherein data storage modules are dynamically allocated.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carteau et al. in view of Kammersgard et al. [US 5,737,189].

Regarding claim 5, Carteau et al. disclose the instant claimed invention except for the canister including a label, the label includes information specific to the plurality of data storage module.

Kammersgard et al. disclose an electronic module (figure 1) including a label mounted thereon a front surface.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mounting label design of Kammersgard et al. on the canister of Carteau et al., for the purpose of indicating specific name of each canister in the electronic system.

The specific information including on the label would have been an obvious consideration based on the specific information of the specific kind of a storage that the manufacture want users to know.

Regarding claim 21, Carteau et al. disclose the instant claimed invention except for the canister comprising a user interface.

Kammersgard et al. disclose the canister comprising a user interface (figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a user interface of Kammersgard et al. in Carteau et al., for the purpose of entering information into the device.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carteau et al. in view of Coale et al. [US 6,272,573].

Regarding claim 20, Carteau et al. disclose the instant claimed invention except for the canister may connect to a docking station.

Coale et al. disclose a storage system (figures 1-2) having a docking station connected to at least one of a canister (figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the docking station design of Coale et al. with the canister of Carteau et al., for the purpose of providing an extra functional canister that is compatible with other electronic devices.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carteau et al. in view of Rabinovitz [US 5,822,184].

Regarding claim 15, Carteau et al. disclose the instant claimed invention except for wherein at least one canister automatically recognizes capabilities of secondary packaging within the data storage system.

Rabinovitz discloses a modular data device (figure 8) having at least one controller (44, figures 6a-6c) being mounted therein and can recognizes capabilities of other packaging within the data device (column 5, lines 36-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a controller device in the canister of Carteau et al., as suggested by Rabinovitz, for the purpose of determining the numbers of packaging in the system.

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Conclusion

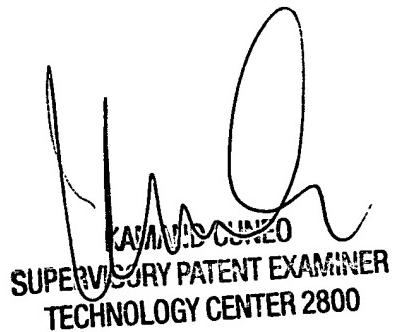
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/18/06

Hung Bui
Art Unit 2841



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